



Application Serial No. 09/929,886

Appellants' Appeal Brief Under 37 C.F.R. § 41.37

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

**Appl. No.** : 09/929,886  
**Applicant(s)** : Allen *et al.*  
**Filed** : August 15, 2001  
**TC/A.U.** : 3695  
**Examiner** : Siegfried E. Chencinski  
**Docket No.** : 09163-20901  
**Customer No.** : 27171  
**Title** : ***METHOD AND SYSTEM FOR AUTOMATIC  
EXECUTION OF A SECURITIES TRANSACTION***

**MAIL STOP APPEAL BRIEF – PATENTS  
COMMISSIONER OF PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450**

**APPEAL TO THE BOARD OF PATENT APPEALS AND  
INTERFERENCES UNDER 37 C.F.R. § 41.37**

07/22/2010 MBLANCO 00000007 133250 09929886  
01 FC:1402 540.00 DA

**TABLE OF CONTENTS**

|  | <b><u>PAGE</u></b> |
|--|--------------------|
| TABLE OF AUTHORITIES .....   | 4                  |
| I. Real Party in Interest (37 C.F.R. § 41.37(c)(1)(i)) .....   | 6                  |
| II. Related Appeals and Interferences (37 C.F.R. § 41.37(c)(1)(ii)) .....  | 6                  |
| III. Status of Claims (37 C.F.R. § 41.37(c)(1)(iii)).....  | 6                  |
| IV. Status of Amendments (37 C.F.R. § 41.37(c)(1)(iv)).....  | 7                  |
| V. Summary of Claimed Subject Matter (37 C.F.R. § 41.37(c)(1)(v)) .....  | 7                  |
| VI. Grounds of Rejection to be Reviewed on Appeal (37 C.F.R. § 41.37(c)(1)(vi)) .....  | 20                 |
| VII. Argument (37 C.F.R. § 41.37(c)(1)(vii)).....  | 21                 |
| A. Claims 12-19, 23-24, 42-50, 54, and 87-89 are Directed to Statutory Subject<br>Matter Under 35 U.S.C. § 101 .....   | 21                 |
| B. Claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94 Comply with the<br>Written Description Requirements Under 35 U.S.C. § 112, ¶ 1.....   | 25                 |
| C. Claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94 Particularly Point Out<br>and Distinctly Claim the Subject Matter which Appellants regard as the Invention<br>Pursuant to 35 U.S.C. § 112, ¶ 2..... | 29                 |
| D. The Pending Claims are Not Obvious in View of the References the Examiner<br>Cited as per 35 U.S.C. § 103 .....   | 30                 |
| 1. Claims 12, 21-22.....   | 30                 |
| 2. Claims 23-34, 42, 52-54, and 87.....  | 35                 |
| 3. Claims 13-15, 17-19, and 93-94 .....  | 36                 |
| 4. Claims 43 and 46-50.....  | 36                 |

|       |  |    |
|-------|--|----|
| 5.    | Claims 55-57.....  | 36 |
| 6.    | Claims 88-89.....  | 36 |
| VIII. | APPENDICES .....   | 39 |
| A.    | APPENDIX 1 - CLAIMS (37 C.F.R. § 41.37(c)(1)(viii)).....             | 39 |
| B.    | APPENDIX 2 - EVIDENCE (37 C.F.R. § 41.37(c)(1)(ix)) .....            | 57 |
| C.    | APPENDIX 3 - RELATED PROCEEDINGS (37 C.F.R. § 41.37(c)(1)(ii)) ..... | 58 |

**TABLE OF AUTHORITIES****Page(s)****CASES**

|  |        |
|--|--------|
| <i>Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.</i> , 598 F.3d 1336, (Fed. Cir. 2010)..... | 26, 28 |
| <i>Benson</i> , 409 U.S. at 70.....  | 22     |
| <i>Bilski v. Kappos</i> , 561 U.S. ____ (2010) .....   | 22, 24 |
| <i>Diamond v. Diehr</i> , 450 U.S. 175, 180 n.5 (1981).....                                    | 24, 25 |
| <i>Falko-Gunter Falkner v. Inglis</i> , 448 F.3d 1357, 1366-67 (Fed. Cir. 2006) .....          | 26     |
| <i>Gottschalk v. Benson</i> , 409 U. S. 63, 70 (1972).....                                     | 22     |
| <i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966) .....                                      | 31     |
| <i>In re Bilski</i> , 545 F.3d at 952 .....  | 23     |
| <i>In re Dossel</i> , 115 F.3d 942, 946 (Fed. Cir. 1997).....                                  | 30     |
| <i>In re Ferguson</i> , 558 F.3d 1359, 1363 (Fed. Cir. 2009) .....                             | 23, 24 |
| <i>In re Gosteli</i> , 872 F.2d 1008, 1012 (Fed.Cir.1989) .....                                | 26     |
| <i>In re Kahn</i> , 441 F.3d 977, 988 (Fed. Cir. 2006) .....                                   | 31     |
| <i>In re Nuijten</i> , 500 F.3d 1346, 1355 (Fed. Cir. 2007).....                               | 23, 24 |
| <i>KSR International Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007) .....                      | 30, 31 |
| <i>Lockwood v. Am. Airlines</i> , 107 F.3d 1565, 1571-72 (Fed. Cir. 1997).....                 | 28     |
| <i>Vas-Cath Inc. v. Mahurkar</i> , 935 F.2d 1555, 1562-63 (Fed. Cir. 1991).....                | 26     |

**STATUTES**

|                                 |        |
|---------------------------------|--------|
| 35 U.S.C. § 101.....            | 20     |
| 35 U.S.C. § 101; (2).....       | 21     |
| 35 U.S.C. § 103.....            | 21, 31 |
| 35 U.S.C. § 103(a) .....        | 20, 21 |
| 35 U.S.C. § 112.....            | passim |
| 37 C.F.R. § 1.130.....          | 57     |
| 37 C.F.R. § 1.136(a)(3).....    | 38     |
| 37 C.F.R. § 1.16.....           | 38     |
| 37 C.F.R. § 1.17.....           | 38     |
| 37 C.F.R. § 1.18.....           | 38     |
| 37 C.F.R. § 41.37.....          | 6      |
| 37 C.F.R. § 41.37(c)(1)(i)..... | 6      |
| 37 C.F.R. § 41.37(C)(1)(I)..... | 6      |

|                                    |       |
|------------------------------------|-------|
| 37 C.F.R. § 41.37(c)(1)(ii).....   | 6, 58 |
| 37 C.F.R. § 41.37(c)(1)(iii).....  | 6     |
| 37 C.F.R. § 41.37(c)(1)(iv).....   | 7     |
| 37 C.F.R. § 41.37(c)(1)(ix).....   | 57    |
| 37 C.F.R. § 41.37(c)(1)(v).....    | 7     |
| 37 C.F.R. § 41.37(c)(1)(vi).....   | 20    |
| 37 C.F.R. § 41.37(c)(1)(vii).....  | 21    |
| 37 C.F.R. § 41.37(c)(1)(viii)..... | 39    |
| 37 C.F.R. § 41.37(c)(1)(x).....    | 58    |
| 37 C.F.R. §1.131.....              | 57    |
| 37 C.F.R. §1.132.....              | 57    |

The Examiner mailed a final rejection on January 20, 2010, setting a three-month shortened statutory period for a response. Appellants filed a notice of appeal on May 20, 2010, with a petition for a one month extension of time and the necessary fees. Under 37 C.F.R. § 41.37, the time for filing an appeal brief expires on July 20, 2010 -- two months after filing a notice of appeal. As a result, this Appeal Brief is timely. Appellants respectfully note that this Appeal Brief is filed under the current rules contained in 37 C.F.R. § 41.37 (and not the "new format" which is not yet in effect).

In view of the following arguments, Appellants respectfully request reconsideration, withdrawal of the outstanding rejections, and allowance of the pending claims.

**I. REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))**

The real party in interest is The New York Stock Exchange, Inc of New York, New York vis-à-vis Assignments that were recorded on August 15, 2001, at Reel 012085, Frame 0390.

**II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))**

There are no related Appeals or Interferences known to Appellants that will directly affect, be affected by, or have a bearing on the Board of Patent Appeal and Interference's ("Board"'s) decision in the instant appeal. No continuations have been filed.

**III. STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))**

Claims 12-15, 17-19, 21-24, 42-43, 46-50, 52-57, 87-89, and 93-94 attached to Appendix 1 are pending and presently on appeal. Claims 1-11, 16, 20, 25-41, 44-45, 51, 58-86, and 90-92 have been previously cancelled.

**IV. STATUS OF AMENDMENTS (37 C.F.R. § 41.37(c)(1)(iv))**

Appellants did not file any amendments following the Final Office Action dated January 20, 2010 (the "Final Office Action").

**V. SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. § 41.37(c)(1)(v))**

Independent claim 12, upon which claims 13-15, 17-19, and 93-94 are dependent, recites a method that is implemented at least partially in a programmed computer (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B) that is for processing a round-lot securities order on a single securities exchange (Specification, page 2, lines 16-17; page 3, lines 3-5; page 27, line 11 – page 29, line 11; page 32, line 21 – page 60, line 15; Figures 4A-4B). The programmed computer receives an execution allocation option for a security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The execution allocation option is one of three options selected from a group consisting of (i) allocate execution to crowd only, (ii) allocate execution to book only, or (iii) allocate a percentage of execution to crowd and allocate a percentage of execution to book (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer receives the round-lot securities order for the security after the programmed computer receives the execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer determines whether the securities order includes an indicator requesting automatic execution (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page

60, line 15; Figures 4A-19F). The indicator directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell, as reflected in a quote price for the security that is published by the single securities exchange, and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order does not include the indicator, the securities order is exposed to the auction market crowd of the single securities exchange for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order includes the indicator, the programmed computer automatically executes the securities order at the best bid to buy or best offer to sell, as reflected in the published quote price for the security, without exposing the securities order for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). After the programmed computer automatically executes the securities order, the programmed computer allocates shares of the automatic execution among contra parties according to the previously received execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

Independent claim 21 recites a computer-readable medium having executable software code stored on the computer-readable medium (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B). The code on the computer-readable medium is for processing a round-lot securities order on a



single securities exchange (Specification, page 2, lines 16-17; page 3, lines 3-5; page 27, line 11 – page 29, line 11; page 32, line 21 – page 60, line 15; Figures 4A-4B). The code includes code to perform each of the steps present in independent claim 12 (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

Independent claim 22 recites a programmed computer, or computer that is programmed (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B) to process a round-lot securities order on a single securities exchange (Specification, page 2, lines 16-17; page 3, lines 3-5; page 27, line 11 – page 29, line 11; page 32, line 21 – page 60, line 15; Figures 4A-4B). The programmed computer includes a memory having at least one region for storing computer executable code and a process for executing the program code stored in the memory (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B). The program code includes code to perform each of the steps present in independent claim 12 (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

Independent claim 23 recites a method that is implemented at least partially in a programmed computer (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B) that is for processing a round-lot limited buy or sell order for a security on a single securities exchange with an auction market crowd (Specification, page 2, lines 16-17; page 3, lines 3-5; page 27, line 11 – page 29, line 11; page 32, line 21 – page 60, line 15; Figures 4A-4B). The programmed computer receives an execution allocation option for a security (Specification, page 2, line 11 – page 4,

line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The execution allocation option is one of three options selected from a group consisting of (i) allocate execution to crowd only, (ii) allocate execution to book only, or (iii) allocate a percentage of execution to crowd and allocate a percentage of execution to book (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

The programmed computer receives the round-lot limit order for the security after the programmed computer receives the execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer determines whether the limit order includes an indicator requesting automatic execution (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The indicator directs the single securities exchange to execute the limit order at either a best offer to sell or best bid to buy as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the limit order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer determines whether the limited order qualifies for automatic execution (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the limit order does not include the indicator or does not qualify for automatic execution, the limit order is exposed to the auction market crowd for possible price improvement

(Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the limit order includes the indicator and qualifies for automatic execution, the programmed computer automatically executes the limit order against the respective best offer to sell or best bid to buy for the security, without exposing the limit order to the auction market crowd for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). After the programmed computer automatically executes the limit order, the programmed computer allocates shares of the automatic execution among contra parties according to the previously received execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

Independent claim 24 recites a method that is implemented at least partially in a programmed computer (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B) that is for processing a round-lot market buy or sell order for a security on a single securities exchange with an auction market crowd (Specification, page 2, lines 16-17; page 3, lines 3-5; page 27, line 11 – page 29, line 11; page 32, line 21 – page 60, line 15; Figures 4A-4B). The programmed computer receives an execution allocation option for the security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The execution allocation option is one of three options selected from a group consisting of (i) allocate execution to crowd only, (ii) allocate execution to book only, or (iii) allocate a percentage of execution to crowd and allocate a percentage of

execution to book (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

The programmed computer receives the round-lot market order for the security after the programmed computer receives the execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer determines whether the market order includes an indicator requesting automatic execution (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The indicator directs the single securities exchange to execute the market order at either a best offer to sell or best bid to buy as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the market order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer determines whether the market order qualifies for automatic execution (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the market order does not include the indicator or does not qualify for automatic execution, the market order is exposed to the auction market crowd for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the market order includes the indicator and qualifies for automatic execution, the programmed computer automatically executes the market order against the respective best offer to sell or best

bid to buy for the security, without exposing the market order to the auction market crowd for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). After the programmed computer automatically executes at least a portion of the market order, the programmed computer allocates shares of the automatic execution among contra parties according to the previously received execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

Independent claim 42, upon which claims 43 and 46-50 are dependent, recites a method that is implemented at least partially in a programmed computer (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B) that is for processing a round-lot securities order on a single securities exchange (Specification, page 2, lines 16-17; page 3, lines 3-5; page 27, line 11 – page 29, line 11; page 32, line 21 – page 60, line 15; Figures 4A-4B). The programmed computer receives an execution allocation option for a security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The execution allocation option is one of three options selected from a group consisting of (i) allocate execution to crowd only, (ii) allocate execution to book only, or (iii) allocate a percentage of execution to crowd and allocate a percentage of execution to book (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer receives the round-lot securities order for the security after the programmed computer receives the execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8,

line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer determines whether the securities order includes an indicator requesting automatic execution and a price of the securities order (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The indicator directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order does not include the indicator, the securities order is exposed to the auction market crowd of the single securities exchange for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). Exposing the securities order to the auction market crowd of the single securities exchange for possible price improvement is a regular execution (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order includes the indicator, the programmed computer compares the price of the securities order to the published quote price for the security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order includes the indicator and the price of the securities order is not equal to or better than the published quote price for the security, the programmed computer

changes the status of the securities order from automatic execution to regular execution (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order includes the indicator and the price of the securities order is equal to or better than the published quote price for the security, the programmed computer automatically executes the securities order at the best bid to buy or best offer to sell the security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). After the programmed computer automatically executes the securities order, the programmed computer allocates shares of the automatic execution among contra parties according to the previously received execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

Independent claim 52 recites a computer-readable medium, having executable software code stored on the computer-readable medium (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B). The code on the computer-readable medium is for processing a round-lot securities order on a single securities exchange (Specification, page 2, lines 16-17; page 3, lines 3-5; page 27, line 11 – page 29, line 11; page 32, line 21 – page 60, line 15; Figures 4A-4B). The code includes code to perform each of the steps present in independent claim 42, except that the code includes code to assign an execution allocation option to a security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

Independent claim 53 recites a programmed computer, or computer that is programmed

(Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B) o process a round-lot securities order on a single securities exchange (Specification, page 2, lines 16-17; page 3, lines 3-5; page 27, line 11 – page 29, line 11; page 32, line 21 – page 60, line 15; Figures 4A-4B). The programmed computer includes a memory having at least one region for storing computer executable code and a process for executing the program code stored in the memory (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B). The program code includes code to perform each of the steps present in independent claim 42, except that the code includes code to assign an execution allocation option to a security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

Independent claim 54, upon which claims 55-57 are dependent, recites a method that is implemented at least partially in a programmed computer (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B) that is for processing a round-lot securities order on a single securities exchange (Specification, page 2, lines 16-17; page 3, lines 3-5; page 27, line 11 – page 29, line 11; page 32, line 21 – page 60, line 15; Figures 4A-4B). The programmed computer receives an execution allocation option for a security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The execution allocation option is one of three options selected from a group consisting of (i) allocate execution to crowd only, (ii) allocate execution to book only, or (iii) allocate a percentage of execution to crowd and allocate a percentage of execution to book (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line



22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer receives the round-lot securities order for the security after the programmed computer receives the execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer determines whether the securities order includes an indicator requesting automatic execution and a size of the securities order (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The indicator directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order does not include the indicator, the securities order is exposed to the auction market crowd of the single securities exchange for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). Exposing the securities order to the auction market crowd of the single securities exchange for possible price improvement is a regular execution (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order includes the indicator, the programmed computer compares the size of the securities order to a respective interest in the security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10,

line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

The interest in the security is a number of shares of the security at a best offer to sell or best bid to buy that is published by the single securities exchange (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order includes the indicator and the size of the securities order is greater than the interest, the programmed computer changes the status of the securities order from automatic execution to regular execution (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order includes the indicator and the size of the securities order is less than or equal to the interest, the programmed computer automatically executes the securities order at the best bid to buy or best offer to sell the security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). After the programmed computer automatically executes the securities order, the programmed computer allocates shares of the automatic execution among contra parties according to the previously received execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

Independent claim 87, upon which claims 88-89 are dependent, recites a method that is implemented at least partially in a programmed computer (Specification, page 6, lines 18-21; page 8, lines 18-22; page 10, line 23 – page 11, line 23; page 13, line 10 – page 17, line 11; Figures 1A-1B) that is for processing a round-lot securities order on a single securities exchange with an auction market crowd (Specification, page 2, lines 16-17; page 3, lines 3-5; page 27, line

11 – page 29, line 11; page 32, line 21 – page 60, line 15; Figures 4A-4B). The programmed computer receives an execution allocation option for a security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The execution allocation option is one of three options selected from the group consisting of (i) allocate execution to crowd only, (ii) allocate execution to book only, or (iii) allocate a percentage of execution to crowd and allocate a percentage of execution to book (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer receives the round-lot securities order for the security after receiving the execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). The programmed computer determines whether the securities order is identified for automatic execution (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). Automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order is not identified for automatic execution, the securities order is exposed to the auction market crowd of the single securities exchange for possible price improvement (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21;

page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order is identified for automatic execution, the programmed computer automatically executes the securities order against the best bid to buy or best offer to sell the security as reflected in the published quote price for the security (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). If the securities order was automatically executed against the published quote for the security, the programmed computer updates the published quote for the security based on the execution of the securities order (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F). After automatically executing the securities order, the programmed computer allocates shares of the automatic execution among contra parties according to the previously received execution allocation option (Specification, page 2, line 11 – page 4, line 22; page 8, line 13 – page 10, line 21; page 20, line 22 – page 21, line 14; page 23, line 10 – page 60, line 15; Figures 4A-19F).

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))**

The grounds of rejection to be reviewed on appeal are (1) the rejection of claims 12-19, 23-24, 42-50, 54, and 87-89 under 35 U.S.C. § 101 as being directed to non-statutory subject matter; (2) the rejection of claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94 under 35 U.S.C. § 112, ¶ 1 as failing to comply with the written description requirement; (3) the rejection of claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94 under 35 U.S.C. § 112, ¶ 2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention; (4) the rejection of claims 12-15, 17-19, 21-24, 42, 46-48, 52-57, and 93-94 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,173,270 to

Cristofich *et al.* ("Cristofich"), the present Specification of Appellants ("Appellants' Specification"), U.S. Pat. No. 6,098,051 to Lupien *et al.* ("Lupien"), and U.S. Pat. No. 4,412,287 to Braddock III ("Braddock"); (5) the rejection of claims 43 and 49 under 35 U.S.C. § 103(a) as being unpatentable over Cristofich, Appellants' Specification, Lupien, and Braddock, in further view of U.S. Pat. Pub. No. 2001/0044767 A1 to Madoff *et al.* ("Madoff"); (6) the rejection of claim 50 under 35 U.S.C. § 103(a) as being unpatentable over Cristofich, Appellants' Specification, Lupien, and Braddock, in further view of U.S. Pat. No. 6,519,574 to Wilton *et al.* ("Wilton"); and (7) the rejection of claims 87-89 under 35 U.S.C. § 103(a) as being unpatentable over Cristofich in view of Appellants' Specification, Lupien, and New York Stock Exchange Systems and Trading Procedures, NYSE Working Paper #93-01, Draft 1.2 April 27, 1993, by Hasbrouch, Sofianos, and Sosebee ("NYSE Working Paper"). Each ground of rejection to be reviewed on appeal arises out of the Final Office Action.

## **VII. ARGUMENT (37 C.F.R. § 41.37(c)(1)(vii))**

Appellants respectfully submit that each of the pending claims (1) are directed to statutory subject matter as to satisfy the legal thresholds set forth in 35 U.S.C. § 101; (2) comply with the written description requirements under 35 U.S.C. § 112, ¶ 1; (3) particularly point out and distinctly claim the subject matter which they regard as the invention pursuant to 35 U.S.C. § 112, ¶ 2; and (4) are not obvious in view of the references cited by the Examiner as per 35 U.S.C. § 103.

### **A. Claims 12-19, 23-24, 42-50, 54, and 87-89 are Directed to Statutory Subject Matter Under 35 U.S.C. § 101**

In the Final Office Action, the Examiner rejected claims 12-19, 23-24, 42-50, 54, and 87-89 under 35 U.S.C. § 101 because, according to the Examiner, the inventions in those claims are not directed to statutory subject matter. Appellants submit that each of claims 12-19, 23-24, 42-

50, 54, and 87-89 are directed to statutory subject matter and, accordingly, the Board's reversal of the rejection is respectfully requested.

In *Bilski v. Kappos*, the Supreme Court has recently explained that the “machine-or-transformation test” (“MorT test”) set forth by the U.S. Court of Appeals for the Federal Circuit, while a “useful and important clue,” is “not the sole test for deciding whether” a claimed process is eligible for a patent. *Bilski v. Kappos*, 561 U.S. \_\_\_\_ (2010). Furthermore, the true test is whether the applicant is attempting to patent an “abstract idea”. *Id.* While the Court did not specifically define a test for what constitutes an “abstract idea,” its past precedent is telling. As the *Bilski* Court stated, in *Gottschalk v. Benson*, 409 U. S. 63, 70 (1972), it held that “[a] principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.” *Id.* (quoting *Benson*, 409 U.S. at 70 (internal quotations omitted)).

Appellants respectfully assert that independent claims 12, 23-24, 42, 54, and 87 are not mere principles, fundamental truths, original causes, or motives. Rather, they are discrete and finite technical processes that are implemented at least partially on a computer that is specifically programmed to process a particular type of order -- for example, a round-lot securities order, as in independent claims 12, 42, 54 and 87, a round-lot limit buy or sell order in independent claim 23, a round-lot market buy or sell order in independent claim 24. In other words, these claims are not trying to preempt an entire field from using a mathematical formula, like binary to decimal conversion in *Benson*, and, therefore, are not “abstract.” For this reason alone, the independent claims 12, 23, 42, 54, and 87, and the claims depending therefrom, comprise patent eligible processes and are, thus, directed to statutory subject matter.

In addition, Appellants submit that the rejected independent claims 12, 23, 42, 54, and 87 satisfy the MorT test, which still serves as an “important clue” for finding them patent eligible. The MorT test reads that: “A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, *or* (2) it transforms a particular article into a different state or thing.” *In re Ferguson*, 558 F.3d 1359, 1363 (Fed. Cir. 2009) (quoting *In re Bilski*, 545 F.3d at 952 (internal citations omitted) (emphasis in original)). To be “tied” to a “particular machine” the claims must be “tied to any concrete parts, devices, or combination of devices.” *Id.* at 1364. This is because the Federal Circuit has held that a “machine” is a “concrete thing, consisting of parts, or of certain devices and combination of devices” which “includes every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result.” *Id.* (quoting *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007)). Turning the present invention, each of independent claims 12, 23, 42, 54, and 87 performs a majority of their steps by a “programmed computer.” Such a computer hardware setup is painstakingly described in Figures 1A-1B and pages 11-17 of the Specification. For example,

In one embodiment, terminals 120, which run computer software code, are traditional computer workstations, which include a central processor unit (CPU) 122, memory 124 (RAM, ROM or both), data storage 126, removable data storage media 128 and input/output ports 130. These components are interconnected in terminal 120 by a system/data bus 132. Terminals 120 are interconnected at non-member institution by a local area network (LAN), wide area network (WAN), or other equivalent network 134. The various terminals 120 of non-member institution 109 are electronically linked to member(s) of the exchange 101 by appropriate data transmission and reception equipment 136. In the illustrated embodiment, this includes a transmitter 138 and a receiver 140, which are configured to exchange data or information between the non-member institution 109 and the member of the exchange 101. (Specification, page 13, lines 10-20).

In another example, the “Common Message Switch (CMS) 103 and Designated Order Turnaround System (DOT) 105, which is known on the NYSE as SuperDot” are also described

(Specification, page 11, lines 1-17). The “programmed computer” -- the working horse of the claims -- is clearly a “concrete thing, consisting of parts, or of certain devices and combinations of devices” for it at least comprises a “mechanical device or combination of mechanical powers and devices” that “perform some function and produce a certain effect or result.” *In re Ferguson*, 558 F.3d at 1363 (quoting *In re Nuijten*, 500 F.3d at 1355).

The Examiner’s rejection was based on his reading and understanding of the *In re Bilski* MorT test. While under the Federal Circuit’s test, the Examiner was correct to analyze the pending method claims under the MorT test, the Examiner improperly supplemented the MorT test with additional requirements in the name of assessing whether “the use of a specific machine or transformation ... impose[d] meaningful limits on the claim’s scope to impart patent-eligibility” and not “merely be insignificant extra-solution activity.” Final Office Action, p.3-4. In particular, the Examiner contended that “the statutory component must more specifically be an automated programmed electronic computer or computer processor or server, since simply a computer could mean a human using a desktop computer to perform all of the steps by hand using the computer as a tool to perform all of the claimed tasks.” *Id.* at p.4

In *Bilski v. Kappos*, the Supreme Court has “more than once cautioned that courts should not read into the patent laws limitations and conditions which the legislature has not expressed.” *Bilski v. Kappos*, 561 U.S. \_\_\_\_ (2010) (internal quotations omitted). While, it is clear in the claims that certain steps are performed “by a programmed computer” not by a user sending input to a programmed computer, the Examiner’s requirements that a claim be rejected merely because a user uses a computer, for example, by providing input to a computer is in error. One need only to turn to a representative claim at issue in *Diamond v. Diehr* to see that the processes therein are performed “with the aid of the digital computer” and that many of the steps include a user



providing the computer input, for example, “constantly determining the temperature” and “constantly providing the computer with the temperature....” *Diamond v. Diehr*, 450 U.S. 175, 180 n.5 (1981).<sup>1</sup> Accordingly, the independent claims 12, 23, 42, 54, and 87, and the claims depending therefrom, satisfy the MorT test, which further indicates that those claims are directed to statutory subject matter.

**B. Claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94 Comply with the Written Description Requirements Under 35 U.S.C. § 112, ¶ 1**

In the Final Office Action, the Examiner rejected claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94 under 35 U.S.C. § 112, ¶ 1, as, according to the Examiner, failing to comply with the written description requirement. Appellants submit that each of claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94 satisfies the written description requirement because one of ordinary skill in the art would clearly view the Appellants in possession of the claimed invention by reading the Specification. Accordingly, the Board's reversal of the rejection is respectfully requested.

In *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, the Federal Circuit held that “the description must ‘clearly allow persons of ordinary skill in the art to recognize that [the inventor]

---

<sup>1</sup> (“1. A method of operating a rubber-molding press for precision molded compounds with the aid of a digital computer, comprising: providing said computer with a data base for said press including at least, natural logarithm conversion data (ln), the activation energy constant (C) unique to each batch of said compound being molded, and a constant (x) dependent upon the geometry of the particular mold of the press, initiating an interval timer in said computer upon the closure of the press for monitoring the elapsed time of said closure, constantly determining the temperature (Z) of the mold at a location closely adjacent to the mold cavity in the press during molding, constantly providing the computer with the temperature (Z), repetitively calculating in the computer, at frequent intervals during each cure, the Arrhenius equation for reaction time during the cure, which is  $\ln v = CZ + x$  where  $v$  is the total required cure time, repetitively comparing in the computer at said frequent intervals during the cure each said calculation of the total required cure time calculated with the Arrhenius equation and said elapsed time, and opening the press automatically when a said comparison indicates equivalence) (emphasis added).

invented what is claimed.” 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562-63 (Fed. Cir. 1991) (citing *In re Gosteli*, 872 F.2d 1008, 1012 (Fed.Cir.1989)). “In other words, the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Id.* (citations omitted). The Federal Circuit “made clear that the written description requirement does not demand either examples or an actual reduction to practice; a constructive reduction to practice that in a definite way identifies the claimed invention can satisfy the written description requirement.” *Id.* at 1352+ (citing *Falko-Gunter Falkner v. Inglis*, 448 F.3d 1357, 1366-67 (Fed. Cir. 2006)).

In the Final Office Action, the Examiner argues that in independent claim 12, the following steps are lacking sufficient written description with respect to their recitation of “by the programmed computer”: “(a) receiving by the programmed computer, an execution allocation option for a security”; “(b) receiving by the programmed computer, the round-lot securities order for the security, after receiving the execution allocation option”; and “(c) determining by the programmed computer, whether the securities order includes an indicator requesting automatic execution...” The Examiner reasons that the Specification lacks support for “by the programmed computer” in these steps “since the specification on pages 6 and 7 specifies a human being, a clerk or a specialist, performing the step of reviewing the incoming order on a computer screen and then making a determination of which way to route the order or what action to take (by the clerk – p.6, l. 22 – p.7, l.6; and alternatively, by a trading post specialist on he[sic] Exchange Floor (p.7, ll. 7-13)[]).” Respectfully, those pages of the Specification merely provide an example of how an exchange operated without aspects of the presently claimed invention. In other words, the Examiner has misread pages 6-7 of the

Specification. This is apparent because, at page 6, lines 6-7, the Specification clearly states:

“Before describing the instant invention in detail, it is helpful to understand a typical securities transaction, as it might be handled by an exchange.” Then, at page 8, lines 7-12:

As illustrated in this example, there are a number of steps that occur between the time an investor submits an order and the time the investor receives a trade confirmation. The instant invention provides an opportunity to reduce that time by moving some of the steps out of the order execution cycle, or entirely eliminating certain steps, thereby reducing the time between order submission and trade confirmation. These aspects of the invention are provided in greater detail below.

(Specification, page 8, lines 7-12).

On the other hand, the Specification at page 27, lines 11-15 and Figure 4A provide the support necessary to one of ordinary skill in the art to establish that Appellants were in possession of the claimed invention. In particular, “At step 402, SuperDot 105 receives an order from CMS 103. At step 404, system 100 determines whether the order is designated as an NX order, thereby requesting automatic execution against the quote” (Specification, page 27, lines 11-15; Figure 4). SuperDot 105 is “the Designated Order Turnaround System” that is part of system 100 and “determines whether the order is eligible for automatic execution....” (Specification, page 11, lines 8-9; Specification, page 8, lines 21-22). CMS 103 is Common Message Switch 103, the role of which “is to receive, validate and pass order and administrative messages received from member firms to other NYSE systems” (Specification, page 17, lines 3-6). System 100 as shown in Figure 1A includes workstations, CPUs, memories, data storage, I/O ports, transmitters, and receivers (Specification, page 13, lines 10-20; Figure 1A).

One of ordinary skill in the art would understand that these steps which are expressly performed by various computer systems could be performed “by the programmed computer” let alone that Appellants were in “possession” of this subject matter as claimed. Furthermore, there is no requirement “that the specification recite the claimed invention *in haec verba*....” *Ariad*

*Pharms.*, 598 F.3d at 1352 (citing *Lockwood v. Am. Airlines*, 107 F.3d 1565, 1571-72 (Fed. Cir. 1997)). Thus, independent claim 12 and the claims depending therefrom comply with the written description requirement of 35 U.S.C. § 112, ¶ 1.

In the Final Office Action, the Examiner similarly argues that “the same lack of support appears to exist for independent claims 23 [steps] (c) and (d), 24 [steps] (c) and (d), 42 [step] (c), 54 [step] (c), and 87 [step] (c).” The steps at issue in claim 23 are “(c) determining by the programmed computer, whether the limit order included an indicator requesting automatic execution”; and “(d) determining by the programmed computer, whether the limit order qualifies for automatic execution.” The steps at issue in claim 24 are “(c) determining by the programmed computer, whether the market order includes an indicator requesting automatic execution”; and “(d) determining by the programmed computer, whether the market order qualifies for automatic execution.” The step at issue in claim 42 is “(c) determining by the programmed computer, whether the securities order includes an indicator requesting automatic execution and a price of the securities order.” The step at issue in claim 54 is “(c) determining by the programmed computer, whether the securities order includes an indicator requesting automatic execution and a size of the securities order.” The step at issue in claim 87 is “(d) determining by the programmed computer, whether the securities order is identified for automatic execution.” The fact that each of these steps at issue is performed “by the programmed computer” is likewise disclosed in the Specification at page 27, lines 11-15 and Figure 4A. Accordingly, independent claims 23-24, 42, 54, and 87, and the claims depending therefrom, satisfy the written description requirement of 35 U.S.C. § 112, ¶ 1.

**C. Claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94 Particularly Point Out and Distinctly Claim the Subject Matter which Appellants regard as the Invention Pursuant to 35 U.S.C. § 112, ¶ 2**

In the Final Office Action, the Examiner rejected claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94 under 35 U.S.C. § 112, ¶ 2, as, according to the Examiner, being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Appellants submit that each of claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94 are definite because they particularly point out and distinctly claim the subject matter which Appellants regard as the invention. Accordingly, the Board's reversal of the rejection is respectfully requested.

The Examiner argues that “[e]ach of the dependent[sic] claims 12, 21, 22, 23, 24, 42, 53, 54, and 87 leaves at least one conditional limitation hanging, i.e. unresolved. With claim 12 as exemplary, conditional limitation d), if activated, fails to complete a transaction for processing a round-lot securities order as required by the preamble.” Appellants respectfully disagree with Examiner's contention. The preamble of claim 12 reads: “A method implemented at least partially in a programmed computer for processing a round-lot securities order on a single securities exchange, the method comprising....” Limitation d) of independent claim 12 reads: “if the securities order does not include the indicator requesting automatic execution, exposing the securities order to the auction market crowd of the single securities exchange for possible price improvement.” In one aspect of the present invention, if the securities order meets the criteria of the “if” statement of step d), it would be processed by being exposed to the auction market crowd of the single securities exchange for possible price improvement. One of ordinary skill in the art would know that processing an order does not equate with executing an order, as the Examiner alludes, because on exchange-based markets, only a fraction of orders execute, but the exchange-based systems process each of them. Likewise, each other independent claim also uses the term

“processing” in the preamble, not “executing.” Therefore, independent claims 12, 21-24, 42, 53-54, and 87, and the claims depending therefrom, are definite under 35 U.S.C. § 112, ¶ 2.<sup>2</sup>

**D. The Pending Claims are Not Obvious in View of the References the Examiner Cited as per 35 U.S.C. § 103**

In the Final Office Action, the Examiner rejected (1) independent claims 12, 21-24, 42, and 52-54 under 35 U.S.C. § 103(a) as being unpatentable over Cristofich, Appellants' Specification, Lupien, and Braddock and (2) independent claim 87 under 35 U.S.C. § 103(a) as being unpatentable over Cristofich in view of Appellants' Specification, Lupien, and NYSE Working Paper. Appellants submit that each of independent claims 12, 21-24, 42, 52-54, and 87, and the claims depending therefrom, are not obvious in light of cited references and, accordingly, the Board's reversal of the rejection is respectfully requested.

**1. Claims 12, 21-22**

Appellants respectfully submit that claims 12 and 21-22 would not have been obvious to one of ordinary skill in the art, at the time the invention was made, and that the Final Office Action has failed to establish a *prima facie* case of obviousness.

As reiterated by the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), the framework or the objective analysis for determining obviousness under 35 U.S.C. § 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). The factual inquiries are: (a) determining the scope and content of the prior art; (b) ascertaining the differences

---

<sup>2</sup> Appellants also note that Examiner's reasoning does not seem appropriate for a rejection under 35 U.S.C. § 112, ¶ 2 as the Examiner has not pointed to any failure in the Specification with respect to the claimed subject matter. “Failure to describe adequately the necessary structure, material, or acts in the written description means that the drafter has failed to comply with the mandate of § 112 ¶ 2 — (2)(a) in the model above — the mandate that all claims must particularly point out and distinctly claim the subject matter which the applicant regards as his invention.” *In re Dossel*, 115 F.3d 942, 946 (Fed. Cir. 1997).

between the claimed invention and the prior art; and (c) resolving the level of ordinary skill in the pertinent art. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 399. The Supreme Court in *KSR* further noted that the analysis supporting a rejection under 35 U.S.C. § 103 should be made explicit. The Court stated that “rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.* at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

In attempting to establish a prima facie case of obviousness, the Examiner has, respectfully, greatly mischaracterized the scope and content of the prior art. First, in the Final Office Action, the Examiner contends that the limitation in step b), “after receiving[/assigning] the execution allocation,” is disclosed in Cristofich at column 2, lines 32-33. However, Cristofich at column 2, lines 32-33 reads: “for the purchase of securities in accordance with pre-established plan criteria.” Clearly, this language does not disclose what Examiner purports it does, as there is no mention of anything like an “execution allocation” in the excerpt. Moreover, one of ordinary skill in the art, at the time of the invention, would not have understood an “after receiving[/assigning] the execution allocation” in the context of the present invention to have meant “for the purchase of securities in accordance with pre-established plan criteria.”

Second, the Examiner argues that step c) is disclosed by Cristofich at column 15, line 41.

Step c) reads:

c) determining by the programmed computer, whether the securities order includes an indicator requesting automatic execution, wherein the indicator requesting automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement....

Contrary to the Examiner's contention, Cristofich at column 15, lines 40-43 discloses "Share/Cash Withholding – Designated by the tax payment field as an indicator of whether a stock or cash disbursement is requested. If share withholding, this field will reflect the number of shares withheld." This excerpt from Cristofich only shares the word "indicator" in common with step c). Cristofich is describing a "tax payment field" being used as an "indicator of whether a stock or cash disbursement is requested." This has nothing to do with a programmed computer "determining ... whether the securities order includes an indicator requesting automatic execution" on a single securities exchange. Moreover, unlike the "tax payment field," the "indicator" of the claimed invention, as stated in the wherein clause of step c), "directs the ... exchange to execute the securities order at either a best bid to buy or best offer to sell ... and also acknowledges that the securities order will not be exposed to an auction market crowd ... for possible price improvement." It would be impossible for one of ordinary skill in the art, at the time of the invention, to have arisen at the claimed subject matter of step c) based on a meager description of a "tax payment field" used as an indicator of whether a disbursement is requested.

Nonetheless, the Examiner states that:

The ordinary practitioner would have seen it as obvious to have used indicators throughout the securities transaction invention, including for determining by the programmed computer, whether the securities order includes an indicator requesting automatic execution, wherein the indicator requesting automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement. Performing the trades within the exchange within which the security is listed would have been the most obvious course to take for the ordinary practitioner for this invention, since it would require special instructions to motivate the practitioner to do otherwise....



Appellants contend that the Examiner, respectfully, has applied the teachings of one of ordinary skill in the art to arrive at a limitation wholly unrelated to the present invention. Specifically, step c) regards a programmed computer determining whether a received securities order has an indicator requesting automatic execution. And, if it does, directing the exchange to execute the order at a best bid or best offer and acknowledging that the order will not be exposed to an auction market crowd. The Examiner's reasoning that "[p]erforming the trades within the exchange within which the security is listed would have been the most obvious to course to take ... since it would require special instructions to motivate the practitioner to do otherwise" does not explain why one of ordinary skill would have seen the "tax payment field" in Cristofich and thought to invent a programmed computer that determines "whether the securities order includes an indicator requesting automatic execution."

Third, The Examiner argues that "Braddock discloses exposing the order to an auction market of the single securities exchange for possible price improvement if the securities order does not include an indicator requesting automatic execution (abstract - I. 1; Col. 1, II. 34-37)."

However, the abstract of Braddock reads:

An automated stock exchange in which a computer matches buy and sell orders for a plurality of stocks. An open board simultaneous trading environment is simulated through two stages. The first stage is an order accumulation period which is continuously in operation except for one stock in the second stage. The second stage is an extremely rapid sequential call through. All orders for a given stock are available to customers during the first stage. During the second stage market orders are matched with market orders, then market orders are traded against limit orders as the trading price changes within controlled ranges. The system will also process stop orders, and other specialized transactions.

Furthermore, Column 1, lines 34-37 of Braddock read: "This system was used as early as the 18th century in New York, and is today used on the Honolulu and the Salt Lake City Stock

Exchange. It is a seriatim auction market for each for the stocks on a given exchange.” Here, the Examiner has not shown the prior art to include exposing the order to an auction market of the exchange if the securities order does not include an indicator requesting automatic execution, as nothing in Braddock discloses a system or method exposing an order to an auction market based on the order’s lacking an indicator requesting automatic execution. Moreover, the Examiner has not explained whether it would be obvious to one of ordinary skill in the art to modify or alter Braddock to come to step d).

Fourth, the Examiner contends that:

Re[garding step] e) if the securities order includes the indicator requesting automatic execution, not exposing the securities order for possible price improvement would have been an obvious option for the ordinary practitioner to recognize, since this order instruction implicitly instructs foregoing the price improvement path, since that excludes the price improvement path and other paths not involving automatic execution.

The Examiner’s analysis does not include explaining how the limitations of step e) in which the securities order is executed at the best bid to buy or best offer to sell or are otherwise obvious to one of ordinary skill. In addition, the Examiner’s reasoning that it would have been obvious for a programmed computer to execute the order and not expose it for possible price improvement if it includes the indicator requesting automatic execution lacks any rational underpinning as required by *KSR*. Stating that step e) is obvious “since this order instruction implicitly instructs foregoing the price improvement path, since that excludes the price improvement path and other paths not involving automatic execution” does not explain how one of ordinary skill would develop a programmed computer to check if an indicator requesting automatic execution is in a securities order and to react to the presence of that indicator by not exposing the order to price improvement and instead executing it.

Fifth, the Examiner argues that:

Re[garding step] f) The ordinary practitioner would have seen it as obvious to, after automatically executing the securities order, allocating by the programmed computer, shares of the automatic execution among contra parties according to the previously received execution allocation option, since this is an inherent component of any trade involving one or more contra parties when one or more contra parties are involve[sic].

Like step e), the Examiner contends that step f) is wholly obvious without citing to any prior art references or providing any official notice. Here, the claim goes beyond just allocating shares, rather, it is limited to allocating shares “according to the previously received execution allocation option.” That “execution allocation option” was one of three: “crowd only”; “book only” or “percentage ... to crowd and ... percentage ... to book”. There is no indication in the art that one of ordinary skill at the time of the invention would have found it obvious to allocate shares according to such an execution allocation option and the Examiner’s mere conclusory statement does not support such a finding.

These significant differences between the scope and content of the prior art and the inventions of claims 12 and 21-22 cannot be resolved by the knowledge of one of ordinary skill in the art at the time of the invention. As a result, Appellants submit that the Examiner has not established a prima facie case of obviousness and the Board should withdraw these rejections.

## **2. Claims 23-34, 42, 52-54, and 87**

The Examiner applied the same obviousness analysis as for independent claims 12 and 21-22 to the similar elements of independent claims 23-34, 42, 52-54, and 87. Thus, claims 23-34, 42, 52-54, and 87 are patentable at least for the reasons claims 12 and 21-22 are patentable. Accordingly, Appellants respectfully request that the Board reverse this rejection and allow these claims.

**3. Claims 13-15, 17-19, and 93-94**

Claims 13-15, 17-19, and 93-94 are dependent upon claim 12, and recite further limitations. Thus, claims 13-15, 17-19, and 93-94 are patentable at least for the reasons claim 12 is patentable, and further, because they recite additional limitations. Accordingly, Appellants respectfully request that the Board reverse this rejection and allow these claims.

**4. Claims 43 and 46-50**

Claims 43 and 46-50 are dependent upon claim 42, and recite further limitations. Thus, claims 43 and 46-50 are patentable at least for the reasons claim 42 is patentable, and further, because they recite additional limitations. Accordingly, Appellants respectfully request that the Board reverse this rejection and allow these claims.

**5. Claims 55-57**

Claims 55-57 are dependent upon claim 54, and recite further limitations. Thus, claims 55-57 are patentable at least for the reasons claim 54 is patentable, and further, because they recite additional limitations. Accordingly, Appellants respectfully request that the Board reverse this rejection and allow these claims.

**6. Claims 88-89**

Claims 88-89 are dependent upon claim 87, and recite further limitations. Thus, claims 88-89 are patentable at least for the reasons claim 87 is patentable, and further, because they recite additional limitations. Accordingly, Appellants respectfully request that the Board reverse this rejection and allow these claims.

For all of the above noted reasons, it is strongly contended that certain clear differences exist between the present invention as claimed in claims 12-15, 17-19, 23-24, 42, 54-57, 87-89,


and 93-94 and the prior art relied upon by the Examiner. It is further contended that these differences are more than sufficient that the present invention would not have been obvious to a person having ordinary skill in the art at the time the invention was made.

The final rejection being in error, therefore, it is respectfully requested that this honorable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case and indicate the allowability of application claims 12-15, 17-19, 23-24, 42, 54-57, 87-89, and 93-94.

The Commissioner is authorized to charge any additional fees associated with this brief, or credit any overpayment, to Deposit Account No. 13-3250. **EXCEPT** for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 13-3250 (Reference No. 09163.20901). This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

**MILBANK, TWEED, HADLEY & McCLOY LLP**

By:   
Blake Reese, Esq.  
Reg. No. 57,688

Dated: July 20, 2010

**Customer No. 27171**  
**MILBANK, TWEED, HADLEY & McCLOY LLP**  
1 Chase Manhattan Plaza  
New York, NY 10005-1413  
(212) 530-5000 / (212) 530-5219 (facsimile)

## VIII. APPENDICES

### A. APPENDIX 1 - CLAIMS (37 C.F.R. § 41.37(c)(1)(viii))

1 - 11. (cancelled)

12. (previously presented) A method implemented at least partially in a programmed computer for processing a round-lot securities order on a single securities exchange, the method comprising:

a) receiving by the programmed computer, an execution allocation option for a security, wherein the execution allocation option is one of three options selected from the group consisting of allocate execution to crowd only, allocate execution to book only, or allocate a percentage of execution to crowd and allocate a percentage of execution to book;

b) receiving by the programmed computer, the round-lot securities order for the security, after receiving the execution allocation option;

c) determining by the programmed computer, whether the securities order includes an indicator requesting automatic execution, wherein the indicator requesting automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement;

d) if the securities order does not include the indicator requesting automatic execution, exposing the securities order to the auction market crowd of the single securities exchange for possible price improvement;

e) if the securities order includes the indicator requesting automatic execution, automatically executing by the programmed computer, the securities order at the best bid to buy or best offer to sell as reflected in the published a quote price for the security, without exposing the securities order for possible price improvement; and

f) after automatically executing the securities order, allocating by the programmed computer, shares of the automatic execution among contra parties according to the previously received execution allocation option.

13. (original) A method according to claim 12, wherein the securities order is a limit order.

14. (original) A method according to claim 12, wherein the securities order is a market order.

15. (original) A method according to claim 12, further comprising sending an order execution report.

16. (cancelled)

17. (previously presented) A method according to claim 12, wherein automatically executing further comprises at least partially fulfilling the securities order from a display book order.



18. (previously presented) A method according to claim 12, further comprising at least partially fulfilling the securities order from an auction market crowd order after automatically executing the securities order.

19. (previously presented) A method according to claim 12, further comprising at least partially fulfilling the securities order from a display book order after automatically executing the securities order.

20. (cancelled)

21. (previously presented) A computer-readable medium having computer executable software code stored thereon, the code for processing a round-lot securities order on a single securities exchange, the code comprising:

a) code to assign an execution allocation option to a security, wherein the execution allocation option is one of three options selected from the group consisting of allocate execution to crowd only, allocate execution to book only, or allocate a percentage of execution to crowd and allocate a percentage of execution to book;

b) code to receive the round-lot securities order for the security, after assigning the execution allocation option;

c) code to determine whether the securities order includes an indicator requesting automatic execution, wherein the indicator requesting automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange

and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement;

d) if the securities order does not include the indicator requesting automatic execution, code to expose the securities order to the auction market crowd of the single securities exchange for possible price improvement;

e) if the securities order includes the indicator requesting automatic execution, code to automatically execute the securities order at the best bid to buy or best offer to sell as reflected in the published a quote price for the security, without exposing the securities order for possible price improvement; and

f) after automatically executing the securities order, code to allocate shares of the automatic execution among contra parties according to the previously assigned execution allocation option.

22. (previously presented) A programmed computer for processing a round-lot securities order on a single securities exchange, comprising:

a memory having at least one region for storing computer executable program code; and  
a processor for executing the program code stored in the memory; wherein the program code comprising:

a) code to assign an execution allocation option to a security, wherein the execution allocation option is one of three options selected from the group consisting of allocate execution to crowd only, allocate execution to book only, or allocate a percentage of execution to crowd and allocate a percentage of execution to book;

b) code to receive the round-lot securities order for the security, after assigning the

execution allocation option;

c) code to determine whether the securities order includes an indicator requesting automatic execution, wherein the indicator requesting automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement;

d) if the securities order does not include the indicator requesting automatic execution, code to expose the securities order to the auction market crowd of the single securities exchange for possible price improvement;

e) if the securities order includes the indicator requesting automatic execution, code to automatically execute the securities order at the best bid to buy or best offer to sell as reflected in the published quote price for the security, without exposing the securities order for possible price improvement; and

f) after automatically executing the securities order, code to allocate shares of the automatic execution among contra parties according to the previously assigned execution allocation option.

23. (previously presented) A method implemented at least partially in a programmed computer for processing a round-lot limit buy or sell order for a security on a single securities exchange with an auction market crowd, the method comprising:

a) receiving by the programmed computer, an execution allocation option for the security, wherein the execution allocation option is one of three options selected from the group consisting

of allocate execution to crowd only, allocate execution to book only, or allocate a percentage of execution to crowd and allocate a percentage of execution to book;

b) receiving by the programmed computer, the round-lot limit order for the security, after receiving the execution allocation option;

c) determining by the programmed computer, whether the limit order includes an indicator requesting automatic execution, wherein the indicator requesting automatic execution directs the single securities exchange to execute the limit order at either a best offer to sell or best bid to buy as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the limit order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement;

d) determining by the programmed computer, whether the limit order qualifies for automatic execution;

e) if the limit order does not include the indicator requesting automatic execution, or if the limit order does not qualify for automatic execution, exposing the limit order to the auction market crowd for possible price;

f) if the limit order includes the indicator requesting automatic execution and the limit order qualifies for automatic execution, automatically executing by the programmed computer, the limit order against the a respective best offer to sell or best bid to buy for the security, without exposing the limit order to the auction market crowd for possible price improvement; and

g) after automatically executing the limit order, allocating by the programmed computer, shares of the automatic execution among contra parties according to the previously received execution allocation option.

24. (previously presented) A method implemented at least partially in a programmed computer for processing a round-lot market buy or sell order for a security on a single securities exchange with an auction market crowd, the method comprising:

a) receiving by the programmed computer, an execution allocation option for the security, wherein the execution allocation option is one of three options selected from the group consisting of allocate execution to crowd only, allocate execution to book only, or allocate a percentage of execution to crowd and allocate a percentage of execution to book;

b) receiving by the programmed computer, the round-lot market order for the security, after receiving the execution allocation option;

c) determining by the programmed computer, whether the market order includes an indicator requesting automatic execution, wherein the indicator requesting automatic execution directs the single securities exchange to execute the market order at either a best offer to sell or best bid to buy as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the market order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement;

d) determining by the programmed computer, whether the market order qualifies for automatic execution;

e) if the market order does not include the indicator requesting automatic execution, or if the market order does not qualify for automatic execution, exposing the market order to the auction market crowd for possible price improvement;

f) if the market order includes the indicator requesting automatic execution and the market order qualifies for automatic execution, automatically executing by the programmed

computer, the market order against the respective best offer to sell or best bid to buy for the security, without exposing the market order to the auction market crowd for possible price improvement; and

g) after automatically executing at least a portion of the market order, allocating by the programmed computer, shares of the automatic execution among contra parties according to the previously received execution allocation option.

25-41. (cancelled)

42. (previously presented) A method implemented at least partially in a programmed computer for processing a round-lot securities order on a single securities exchange, the method comprising:

a) receiving by the programmed computer, an execution allocation option for a security, wherein the execution allocation option is one of three options selected from the group consisting of allocate execution to crowd only, allocate execution to book only, or allocate a percentage of execution to crowd and allocate a percentage of execution to book;

b) receiving by the programmed computer, the round-lot securities order for the security, after receiving the execution allocation option;

c) determining by the programmed computer, whether the securities order includes an indicator requesting automatic execution and a price of the securities order, wherein the indicator requesting automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities

order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement;

d) if the securities order does not include the indicator requesting automatic execution, exposing the securities order to the auction market crowd of the single securities exchange for possible price improvement, wherein exposing the securities order to the auction market crowd of the single securities exchange for possible price improvement is a regular execution;

e) if the securities order includes the indicator requesting automatic execution, comparing by the programmed computer, the price of the securities order to the published quote price for the security;

f) if the securities order includes the indicator requesting automatic execution and the price of the securities order is not equal to or better than the published quote price for the security, changing by the programmed computer, the status of the securities order from automatic execution to regular;

g) if the securities order includes the indicator requesting automatic execution and the price of the securities order is equal to or better than the published quote price for the security, automatically executing by the programmed computer, the securities order at the best bid to buy or best offer to sell the security; and

h) after automatically executing the securities order, allocating by the programmed computer, shares of the automatic execution among contra parties according to the previously received execution allocation option.

43. (previously presented) A method according to claim 42, wherein the securities order further includes a size, the method further comprising:

comparing the size of the securities order with a respective interest in the security; and  
changing the status of at least a portion of the securities order from automatic execution  
to regular execution if the size is greater than the interest.

44-45. (cancelled)

46. (previously presented) A method according to claim 42, further comprising  
sending an execution report for the securities order.

47. (previously presented) A method according to claim 42, wherein the book is a  
display book, the method further comprising at least partially fulfilling the securities order with  
an order on the display book.

48. (previously presented) A method according to claim 42, further comprising at  
least partially fulfilling the securities order with an order from the auction market crowd.

49. (previously presented) A method according to claim 42, wherein the published  
quote price for the security includes a best bid price for the security, the securities order is a sell  
order and the price of the securities order is greater than the best bid price.

50. (previously presented) A method according to claim 42, wherein the published  
quote price for the security includes a best offer price for the security, the securities order is a  
buy order and the price of the securities order is less than the best offer price.



51. (cancelled)

52. (previously presented) A computer-readable medium having computer executable software code stored thereon, the code for processing a round-lot securities order on a single securities exchange, the code comprising:

a) code to assign an execution allocation option to a security, wherein the execution allocation option is one of three options selected from the group consisting of allocate execution to crowd only, allocate execution to book only, or allocate a percentage of execution to crowd and allocate a percentage of execution to book;

b) code to receive the round-lot securities order for the security, after assigning the execution allocation option;

c) code to determine whether the securities order includes an indicator requesting automatic execution and a price of the securities order, wherein the indicator requesting automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement;

d) if the securities order does not include the indicator requesting automatic execution, code to expose the securities order to the auction market crowd of the single securities exchange for possible price improvement, wherein exposing the securities order to the auction market crowd of the single securities exchange for possible price improvement is a regular execution;

e) if the securities order includes the indicator requesting automatic execution, code to compare the price of the securities order to the published a quote price for the security;

f) if the securities order includes the indicator requesting automatic execution and the price of the securities order is not equal to or better than the published quote price for the security, code to change the status of the securities order from automatic execution to regular execution;

g) if the securities order includes the indicator requesting automatic execution and the price of the securities order is equal to or better than the published quote price for the security, code to automatically execute the securities order at the best bid to buy or best offer to sell the security; and

h) after automatically executing the securities order, code to allocate shares of the automatic execution among contra parties according to the previously received execution allocation option.

53. (previously presented) A programmed computer for processing a round-lot securities order on a single securities exchange, comprising:

a memory having at least one region for storing computer executable program code; and  
a processor for executing the program code stored in the memory; wherein the program code comprises:

a) code to assign an execution allocation option to a security, wherein the execution allocation option is one of three options selected from the group consisting of allocate execution to crowd only, allocate execution to book only, or allocate a percentage of execution to crowd and allocate a percentage of execution to book;

b) code to receive the round-lot securities order for the security, after assigning the execution allocation option;

c) code to determine whether the securities order includes an indicator requesting automatic execution and a price of the securities order, wherein the indicator requesting automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement;

d) if the securities order does not include the indicator requesting automatic execution, code to expose the securities order to the auction market crowd of the single securities exchange for possible price improvement, wherein exposing the securities order to the auction market crowd of the single securities exchange for possible price improvement is a regular execution;

e) if the securities order includes the indicator requesting automatic execution, code to compare the price of the securities order to the published quote price for the security;

f) if the securities order includes the indicator requesting automatic execution and the price of the securities order is not equal to or better than the published quote price for the security, code to change the status of the securities order from automatic execution to regular execution;

g) if the securities order includes the indicator requesting automatic execution and the price of the securities order is equal to or better than the published quote price for the security, code to automatically execute the securities order at the best bid to buy or best offer to sell the security; and

h) after automatically executing the securities order, code to allocate shares of the automatic execution among contra parties according to the previously assigned execution allocation option.

54. (previously presented) A method implemented at least partially in a programmed computer for processing a round-lot securities order on a single securities exchange, the method comprising:

a) receiving by the programmed computer, an execution allocation option for a security, wherein the execution allocation option is one of three options selected from the group consisting of allocate execution to crowd only, allocate execution to book only, or allocate a percentage of execution to crowd and allocate a percentage of execution to book;

b) receiving by the programmed computer, the round-lot securities order for the security, after receiving the execution allocation option;

c) determining by the programmed computer, whether the securities order includes an indicator requesting automatic execution and a size of the securities order, wherein the indicator requesting automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement;

d) if the securities order does not include the indicator requesting automatic execution, exposing the securities order to the auction market crowd of the single securities exchange for possible price improvement, wherein exposing the securities order to the auction market crowd

of the single securities exchange for possible price improvement is a regular execution;

e) if the securities order includes the indicator requesting automatic execution, comparing by the programmed computer, the size of the securities order to a respective interest in the security, wherein interest in the security is a number of shares of the security at a best offer to sell or best bid to buy price that is published by the single securities exchange;

f) if the securities order includes the indicator requesting automatic execution and the size of the securities order is greater than the interest, changing by the programmed computer, the status of at least a portion of the securities order from automatic execution to regular execution;

g) if the securities order includes the indicator requesting automatic execution and the size of the securities order is less than or equal to the interest, automatically executing by the programmed computer, the securities order at the best bid to buy or best offer to sell the security; and

h) after automatically executing the securities order, allocating by the programmed computer, shares of the automatic execution among contra parties according to the previously received execution allocation option.

55. (previously presented) A method according to claim 54, wherein the securities order further includes a price, the method further comprising:

comparing the price of the securities order to a published quote for the security; and  
changing the status of the securities order from automatic execution to regular execution if the price of the securities order is not equal to or better than the published quote for the security.

56. (original) A method according to claim 54, wherein the securities order is a limit order.

57. (original) A method according to claim 54, wherein the securities order is a market order.

58-86. (cancelled)

87. (previously presented) A method implemented at least partially in a programmed computer for processing a round-lot securities order on a single securities exchange with an auction market crowd, the method comprising:

a) receiving by the programmed computer, an execution allocation option for a security, wherein the execution allocation option is one of three options selected from the group consisting of allocate execution to crowd only, allocate execution to book only, or allocate a percentage of execution to crowd and allocate a percentage of execution to book;

b) receiving by the programmed computer, the round-lot securities order for the security, after receiving the execution allocation option;

c) determining by the programmed computer, whether the securities order is identified for automatic execution, wherein automatic execution directs the single securities exchange to execute the securities order at either a best bid to buy or best offer to sell as reflected in a quote price for the security that is published by the single securities exchange and also acknowledges that the securities order will not be exposed to an auction market crowd of the single securities exchange for possible price improvement;

d) if the securities order is not identified for automatic execution, exposing the securities order to the auction market crowd of the single securities exchange for possible price improvement;

e) if the securities order is identified for automatic execution, automatically executing by the programmed computer, the securities order against the best bid to buy or best offer to sell the security as reflected in the published quote price for the security;

f) if the securities order was automatically executed against the published quote for the security, updating by the programmed computer, the published quote for the security based on the execution of the securities order; and

g) after automatically executing the securities order, allocating by the programmed computer, shares of the automatic execution among contra parties according to the previously received execution allocation option.

88. (previously presented) A method according to claim 87, wherein a size of the published quote for the security after updating reflects execution size of the securities order.

89. (previously presented) A method according to claim 87, wherein a size of the published quote for the security after updating represents a minimum quote size, but does not necessarily reflect execution size of the securities order.

90-92. (cancelled)

93. (previously presented) The method according to claim 12, wherein automatically

executing the securities order further comprises:

executing at least a portion of the securities order up to a size of the best bid to buy or best offer to sell as reflected in the published quote for the security.

94. (previously presented) The method according to claim 12, wherein automatically executing the securities order further comprises:

executing all of the securities order.



**B. APPENDIX 2 - EVIDENCE (37 C.F.R. § 41.37(c)(1)(ix))**

No evidence under 37 C.F.R. §§ 1.130, 1.131, or 1.132 has been entered or will be relied upon by Appellants in this appeal.

**C. APPENDIX 3 - RELATED PROCEEDINGS (37 C.F.R. § 41.37(c)(1)(ii))**

No decisions of the Board or of any court have been identified under 37 C.F.R. § 41.37(c)(1)(ii).